Amendments to the Specification:

Please replace paragraph beginning on page 4, line 10 with the following amended paragraph:

FIG. 1B is an equivalent circuit diagram of the frequency-selective circuit of FIG. 1A, including, however, an effective compensation resistor to mitigate the frequency-dependent effects of the finite OTA bandwidth.

Please replace paragraph beginning on page 4, line 13 with the following amended paragraph:

FIG. [[2]] 2A is a circuit diagram in accordance with one embodiment, in which an inductor may be realized through cross-coupled biquad OTAs.

Please add the following paragraph before the paragraph beginning on page 4, line 15 with the following paragraph:

FIG. 2B is a circuit diagram showing a compensating resistance in accordance with an embodiment of the present invention.

Please replace paragraph beginning on page 6, line 11 with the following amended paragraph:

FIG. 1A depicts a straightforward example of a frequency-selective circuit 10 that may be included as, for example, [[as]] a branch of a lumped-parameter, passive filter in an integrated circuit device. Frequency-selective circuit 10 is shown to ~~comprises~~ comprise an inductance in the form of inductor 101 coupled in series with resistor 102. A capacitor 103 is coupled in parallel with the series combination of inductor 101 and resistor 102. As a practical matter, resistor 102 may represent the parasitic resistance associated with inductor 101, a discrete resistor coupled to inductor 101, or a combination thereof. As is well known, the center frequency of circuit 10 is proportional to $(LC)^{-1/2}$, where L represents the magnitude of the inductance of inductor 101 and C represents the magnitude of the capacitance of capacitor 103. The quality factor (Q) of circuit 10 is proportional to $(L/C)^{1/2}/R$, where R represents the magnitude of the resistance of resistor 102. Because, as suggested above, inductive devices are not always easily realizable in accordance with conventional integrated circuit fabrication technology, a necessary inductance in an integrated circuit device may be provided in a circuit such as circuit 10 by resort to a gyrator-based implementation. FIG. 2A depicts a more or less conventional approach to an OTA implementation of a gyrator-synthesized inductor.

Please replace paragraph beginning on page 10, line 20 with the following amended paragraph:

However, in accordance with one embodiment of the invention, OTA bandwidth limitations may be remediated in a more nearly optimal manner through the addition of a resistor that compensates for the effective negative resistance that results from the OTA bandwidth limitation. In one embodiment, the compensating resistor should have a value that compensates for a negative resistance. The magnitude of the negative resistance is approximately equal to 2L (0) Δw. See Eq. 7. In addition, from Eq.7 it may be inferred that an ideal implementation of the compensation resistor will result in a value of resistance that varies with frequency. However, realization of such a frequency-dependent resistor is itself impracticable. Nevertheless, in one embodiment, effective compensation may be achieved by selecting the resistor to have a desired value at a particular operating frequency, w_c, where w_c may be referred to as the frequency of the compensation, or compensation frequency. In one embodiment, w_c may be determined, either empirically or analytically, as the frequency at which maximum Q of the filter in question occurs.

Please replace paragraph beginning on page 13, line 15 with the following amended paragraph:

Specifically, in some embodiments, a Gm-C implementation of elliptic filter 40 may be predicated on OTA implementation of inductors 407 and 409. That is, inductors 407 and 409 are not physical devices but, rather, are reflected inductances that correspond to respective discrete capacitances that are coupled to the output ports of OTA gyrators. In this sense, then, inductors 407 and 409 may be deemed virtual inductors. In one embodiment, inductors 407 and 409 are realized through resort to a gyrator circuit such as set forth in FIG. 2A. (For purposes of simplicity, the complete gyrator structure is not replicated in FIG. 4A.) However, in accordance with a conventional implementation, associated with each of inductors 407 and 409 is a frequency-dependent negative resistance (not illustrated in FIG. 4A) that results from bandwidth limitations inherent in the gyrator OTAs. In accordance with an embodiment of the invention, the effects of the frequency-dependent negative resistance may be countervailed by including a resistor in parallel with the capacitance (C_L) that is coupled to the output ports of the gyrators. FIG. 4B depicts the effective equivalent circuit of an elliptic filter which inductors (such as inductor 407 and inductor 409) are realized by an OTA circuit that includes resistive compensation for bandwidth limitations.

Please replace paragraph beginning on page 14, line 5 with the following amended paragraph:

FIG. 4B is a circuit diagram of the filter 40', with resistor compensation in accordance with one embodiment of the present invention. Filter circuit 40' is seen in FIG. 4B to additionally comprise a first compensating resistor 410 connection in series with inductor 407, and a second compensating resistor 411, connected in series with inductor 409. Recall here inductor 407 and inductor 409, illustrated in FIGs. 4A and 4B, are not physical inductances. Rather ~~that inductor represents~~ these inductors represent the respective inductances reflected to the input port of the gyrator, for example, as a result of a respective load capacitance, C_L, coupled to the output port. Similarly, resistor 410 and resistor 411 represent the respective resistances reflected to the input port as a result of compensating resistors coupled across a load capacitance C_L, in the manner explicitly depicted in FIG. [[2A]] 2B.

Please replace paragraph beginning on page 14, line 16 with the following amended paragraph:

FIGs. 4C and 4D represent, respectively, the DC equivalent and the high-frequency equivalent of the compensated filter illustrated in FIG. 4B. That is, [[a]] at DC all capacitors become open circuited (infinite impedance) and all inductors become short-circuited (zero impedance). At high frequencies (FIG. 4D), all inductances become open-circuited. Inspection and/or analysis of the filter circuit illustrated in FIGs. 4A-4D yield the following conclusions. The gain of the compensated filter of FIG. 4B is smaller by a factor of 2Δ than the gain of the uncompensated filter of FIG. 4A. The stopband attenuation of the compensated filter is similarly 2Δ worse than that of the uncompensated filter. Accordingly, if Δ is small, these effects are negligible. In addition, any diminution in the gain of the compensated filter may be easily recovered by increasing the gain of a preceding stage to corresponding degree.

Please replace paragraph beginning on page 15, line 21 with the following amended paragraph:

In alternative embodiments, receiving system 60 may also comprise a bandwidth-compensated filter [[66]] 65 that may be interposed at one or more points in the receiver signal chain. For example, filter [[66a]] 65a may appear at the input of LNA 61 so as to limit the spectral content of the signal at the input of LNA 61. Alternatively, or additionally, filter [[66b]] 65b may be coupled to the output of LNA 61 so as to limit the bandwidth of the signals that appear at the input of mixer 62.

Please replace paragraph beginning on page 16, line 1 with the following amended paragraph:

Accordingly, from the Description above it is clear that there [[ahs]] has been provided an effective countermeasure to the bandwidth limitations of OTAs that are used in, for example, active filters, including Gm-C filters. In one embodiment, resistive compensation obviates the need to extend OTA bandwidth in order to address anomalies in the Gm-C filter transfer function. Compensation may be effected by determining a compensation frequency, that is, the frequency at which the Q_{max} of the filter in question appears. The value of the compensation resistance is inversely proportional to the tangent of the phase-shift in the frequency-dependent transconductance, at the compensation frequency.